

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

1 1. (original) An electric motor comprising a stator
2 and a rotor, field windings on the stator for producing
3 an AC magnetic field with a vector at successive angular
4 positions around the axis of rotation of the motor when
5 the windings are successively energized with single phase
6 AC power, the rotor having a construction by which it
7 increases the reluctance in the magnetic field when it
8 has an angular orientation out of alignment with the
9 magnetic field vector compared to its reluctance when it
10 is aligned with the magnetic field vector whereby the
11 rotor seeks to rotate in synchronization with the
12 magnetic field vector produced by the field windings, the
13 rotor construction having a diametral high reluctance
14 area and relatively low reluctance areas on opposite
15 sides of said diametral area.

1 2. (original) An electric motor as set forth in
2 claim 1, wherein said high reluctance area includes an
3 air gap.

1 3. (original) An electric motor as set forth in
2 claim 2, wherein said air gap extends uninterrupted
3 across the diameter of the rotor.

1 4. (original) An electric motor as set forth in
2 claim 3, wherein an electrically conductive non-magnetic
3 body is disposed substantially throughout said air gap.

5. (cancelled).

1 6. (new) A controller for a single phase AC motor
2 comprising a circuit for receiving a signal from a sensor
3 for sensing the rotation of the rotor of the motor, a
4 plurality of switches and/or amplifiers that each deliver
5 AC electrical power at its respective output for an
6 associated coil of the motor, the electrical power at
7 each output having an AC frequency common with the
8 electrical power AC frequency at the other outputs, the
9 AC electrical power at each output varying in amplitude
10 in a cyclic manner from a value of zero to a maximum
11 value during each revolution of the rotor of the motor.

1 7. (new) A controller as set forth in claim 6,
2 wherein the controller has two outputs, each output being
3 adapted to drive one of a pair of two motor stator
4 windings, X and Y, arranged physically in quadrature with
5 the magnitude of the AC currents being

6 $I_x = \cos\theta \sin 2\pi f_c t$; and

7 $I_y = \sin\theta \sin 2\pi f_c t$;

8 where f_c is the frequency of the supplied current.

1 8. (new) A controller as set forth in claim 6,
2 having at least three outputs, said controller being
3 arranged to deliver AC power to each of said outputs on a
4 uniform, sequentially timed basis during each revolution
5 of the rotor of the motor.